

IRON ORE ARTIFACTS FROM ALABAMA.

BY H. NEWELL WARDLE.

The attention of the writer was recently called to a series of artifacts of peculiar form and unusual material—all surface finds, from Blount County, Alabama. Their owner and discoverer, Mr. E. S. Ginnane, a local private collector, being unable to account for their singular form, and noting no duplicates on display in the great museums of our cities, kindly sent a selection of the pieces to THE ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA, and, these proving so interesting, followed them with the loan of his entire series for purposes of study.

The material is iron ore of varying grade—some hematite, some limonite. Many of the pieces, taken by themselves, might be considered as implements in the process of blocking out, but, brought into relation to the series, show a definiteness of purpose that calls for interpretation.

In general, the outline is amygdaloid, varying to oblong, with one plane surface and one more or less convex. The plane surface, and occasionally the lateral surfaces also, show signs of rubbing or polishing. Though some pieces thus approach the well-known *boat-stone* in form,¹ neither material nor finish permits their assignment to that class, and the objects are obviously tools. Their narrow ends are frequently flattened, squared or notched. This last peculiarity was the first to attract attention. Taken in conjunction with their relatively great weight, it seemed to throw them into the group of sinkers. But why the notch should have been placed on the ends, in preference to the sides, as in all recognized sinkers, remained a disconcerting problem.

A second possible explanation was their employment as weaving weights where a slender weight would have its advantage among the close-hung strands. Not all the pieces are notched, however, and, of those which are, some have the groove much shallower

¹A boat stone of ferruginous rock or limonite, resembling the specimen shown in Plate VII, fig. 1 was found by Mr. Clarence B. Moore, in the Mound near Chandler Landing, Prairie County, Arkansas. Moore, "Antiquities of the St. Francis, White, and Black Rivers, Arkansas." *Journ. Acad. Nat. Sciences, Philadelphia*, Vol. XIV, p. 346.

(Plate VII, fig. 5), or even absent (Plate VII, figs. 2, 6, 7) at one extremity.

Judged by material alone, all might be classed as paint-stones, for they are quite capable of rendering a red or red-brown paint. But, in that case, why were they ground into so special a form when any irregular shape would serve, as witness other specimens of identical material which bear evidence of such usage and which were collected from the same fields (Plate IX); while, on the other hand, an occasional artifact, not of iron-ore but of ordinary sandstone (Plate VIII, figs. 7, 8, 9), or even of fine-grained quartzite (Plate VIII, fig. 6), may offer the same general characters.

One quality is common to all the pieces under consideration, whatever their composition or their contour—namely grit. This would indicate that they were hones of convenient form for the dressing and finishing of small tools such as awls, needles, fish-hooks, etc. Only occasionally, however, do they exhibit the grooves on their flat surfaces which are attributed to the sharpening and pointing of such tools (Plate VII, fig. 10, Plate VIII, fig. 5.). Moorehead, in "The Stone Age in North America,"² figures two sandstone arrow- and needle-sharpeners from North Dakota, which have the form of the Alabama pieces under discussion, but are grooved from end to end on the face. It may be added that two of the irregular paint stones (or hones?), referred to above (Plate IX, figs. 6, 8) exhibit fine striae, apparently made by such work in sharpening tools, in one instance (Fig. 8), the groove having been partly obliterated by later grinding.

This usage leaves unexplained the notch upon the ends. Obviously it could not have served for the attachment of a thong to prevent loss for the notch is perpendicular to the flat surface of the tool, so that a thong would have traversed its working plane in all cases save in one piece, a very crude one, showing little use—an unthinkable attachment. Such is believed to have been the purpose of the groove which lies along the periphery of the beautiful boat-shaped hones and tool trimmers of Neolithic Scandinavia.³

The only hematite known to the writer, which appears to belong to this class, is in the Andover collection, and is described by Moorehead,⁴ as "a grooved hematite object, the groove extending around

² Vol. II, p. 314.

³ Nilsson, The "Primitive Inhabitants of Scandinavia" (Nilsson on the Stone Age, edited by Sir John Lubbock), pp. 14, 15, Pl. I, fig. 8.

⁴ Op. cit. II, p. 306, fig. 700.

the periphery of the object." Unfortunately, it is impossible to be certain from the illustration, whether the piece is truly one of the group here described.

Actual experiment with the notched hones convinced the writer that the terminal groove had served for the dressing of thong or sinew, the tool being held comfortably in the closed hand, and the thong drawn through the hand and over the end of the stone, cutting more or less deeply into its end and the adjoining faces. This method of handling tends to slant the notch to the left—for right-handed workers. One specimen (Plate VII, fig. 7; text fig. 1) presents, in addition to its notched end, a series of five finer striae across one edge of the hone, apparently cut in by a slender sinew thread.

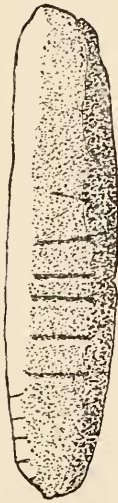


Fig 1.—Sinew scored edge of
Pl. VII, fig. 7.



Fig 2.—Basal view of Pl. VII,
fig. 8.

In addition to the hones already described, there are, in the collection certain irregular pieces which call for special mention. One little hone (Plate VII, fig. 8; text fig. 2), which approaches in form the Antillian *Zemi* or "cocked-hat stone," has been drilled near one edge, probably for the attachment of a cord, which passed in a shallow groove over the edge of the artifact. The working down of the face through use has almost obliterated the groove, and possibly, by wear on the cord, accounts for the loss of the tool.

Another hone (Plate IX, fig. 9), likewise of oval outline on the flat face, is hollowed upon its opposite aspect, so that it comfortably fits the thumb when the piece is turned edgewise in order to use the lateral surfaces for abraiding—as has been freely done.

One of the most interesting tools is roughly quadrangular in outline (Plate IX, fig. 4). Evidence of long and hard service is apparent on one narrow side, as well as on the irregularly convex face and in the deep concavity of its opposite aspect. The curve of this hollow face is such as to suggest the spear-shaft and the paddle handle, or the curved back of a bow, as objects which it had served to finish, but the delicate friction lines, traversing lengthwise the wide groove, suggest a more resisting material than wood. Such a tool as this might have worked the bowl of a stone pipe or the handle of that monolithic axe from Moundville, Alabama.

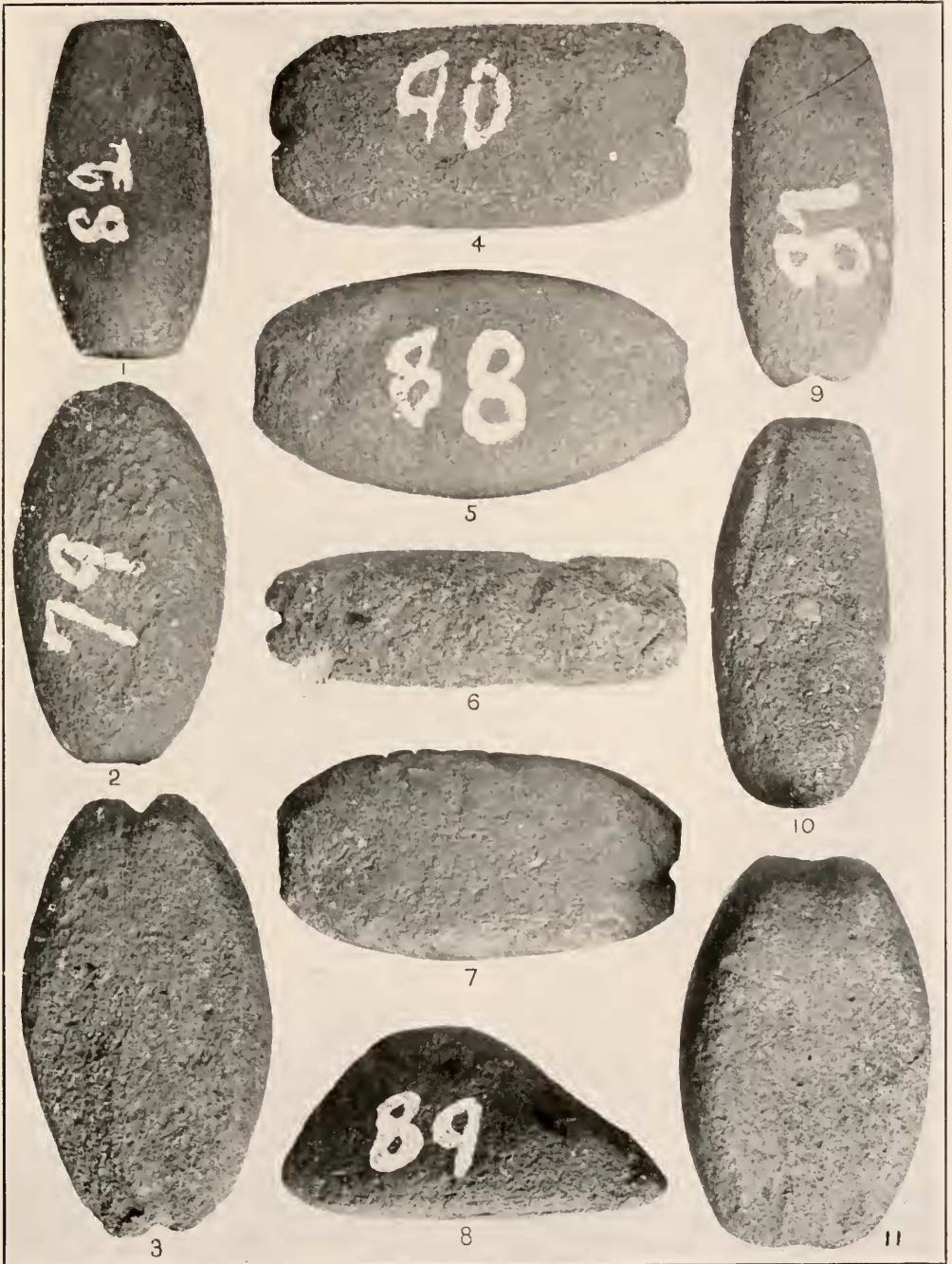
Another of these artifacts is a little truncated pyramid (Plate IX, fig. 10), its narrow base worn off diagonally, the angles of its long sides sharply defined, and the apex broken away so as to leave in doubt the problem of its possible pendent form.

Lastly attention may be called to three pieces of worked hematite (limonite?) (Plate IX, figs. 1, 2, 3.) Upon the first (Plate IX, fig. 1) a mass of limonite crystals, the primitive artificer has just begun to work, as shown by a single rubbed surface. The second (Plate IX, fig. 2) has been roughly blocked into circular form, and the flat base and convex upper aspect offer patches of polished surface; while in the third (Plate IX, fig. 3) the grinding and polishing has progressed farther so that the object takes on the form of the well-known hematite cone. This piece was however far from finished, as attested by the still irregular contours and the rough depressions which the grinding down process has not yet reached.

To sum up: certain iron ore objects of amygdaloid or oblong shape, which, as a group, fall neither into the class of pendent ornaments, nor of weights used in fishing or weaving, are here identified as probable hones and sinew-dressing tools of a special form. It is hoped that the present study offers not only the description of a hitherto undescribed type of stone artefact, but its interpretation in terms of aboriginal life.

EXPLANATION OF PLATES VII, VIII, IX.

The numbers on the specimens refer to Mr. Ginnane's catalogue. All figures are shown natural size.



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